



US006064864A

**United States Patent** [19][11] **Patent Number:** **6,064,864****Lakhani et al.**[45] **Date of Patent:** **May 16, 2000**[54] **ANTENNA INTERLOCK FOR HOUSING ASSEMBLY**5,584,054 12/1996 Tyneski et al. .... 455/566  
5,754,141 5/1998 Thompson et al. .... 343/702[75] Inventors: **Sunil Lakhani**, Atlantic Highlands, N.J.; **Jerrold S. Pine**, Boca Raton, Fla.; **David R. Vogelpohl**, Atlantic Highlands, N.J.*Primary Examiner*—Dwayne D. Bost  
*Assistant Examiner*—Erika A. Gary[73] Assignee: **Lucent Technologies Inc.**, Murray Hill, N.J.[57] **ABSTRACT**[21] Appl. No.: **09/057,029**[22] Filed: **Apr. 8, 1998**[51] **Int. Cl.**<sup>7</sup> ..... **H04B 1/38**; H01Q 1/24; H04M 1/02[52] **U.S. Cl.** ..... **455/90**; 455/550; 343/702; 379/433[58] **Field of Search** ..... 455/90, 550, 575, 455/562, 129; 379/428, 440, 433; 343/702, 883, 899, 901, 906; 361/814, 815[56] **References Cited****U.S. PATENT DOCUMENTS**

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The present invention provides an antenna interlock system comprising an upper housing and a lower housing. The upper housing has first and second interlock tabs disposed along its interior wall, which correspond to third and fourth interlock tabs disposed along the interior wall of the lower housing, the interlock tabs each having an aperture shaped to closely receive the antenna unit. The interlock tabs are disposed relative to each other such that when the upper and lower housings are assembled together, the apertures in the interlock tabs together define a pathway for receiving the antenna unit, and such that when the antenna unit is inserted through the antenna opening and into the receiving apertures, the antenna unit and the interlock tabs hold the upper and lower housing together.

**18 Claims, 4 Drawing Sheets**